CLAIMS

1. A method of transmitting a message comprising a sequence of ordered data portions (I-V) between a source node (s) and a destination node (d) in a network, the method comprising

assigning a route from a plurality of different routes (A-E) to each of the data portions (I-V), and

transmitting each of the data portions (I-V) at a specific time based on the assigned route and order such that the portions are received in the ordered sequence at the destination node (d).

2. The method of claim 1 further comprising the source node (s) not being within the transmission range of the destination (d) node and each route (A-E) comprising at least one node (a-c, e-g) for forwarding the data portion.

3. The method of claim 2, wherein said data portion comprises route data (29) specifying the addresses of the at least one node along the route (a-c, e-g).

4. The method of claim 3 further comprising each of the at least one node (a-c, e-g) along the route receiving the data portion (I-V), checking said route data (29) associated with the data portion and forwarding the portion to the next node indicated by said route data.

5. The method of claim 4 or 5 wherein the data portion and the route data are included in a Media Access Control data frame (25-32).

6. The method of any one of the preceding claims, wherein each route (A-E) is selected with consideration to the information on the distances between nodes in the network.

7. The method of any one of the preceding claims, wherein the network

has a coordinator node (1) and the coordinator stores the information on the distances between nodes in the network in the storage (6) of the coordinator node.

8. The method of claim 7 wherein said information stored in the network coordinator is changed in response to a change in position of a network node.

9. The method of claim 7 or 8 wherein the source node (s) is not the network coordinator, the source node (s) requests route data to a destination node (d) from the network coordinator (1) and the coordinator sends route data to the source node.

10. The method of claim 9 wherein the route data comprises a plurality of available routes between the source node and the destination node and the time of flight of data along each of the plurality of routes (39, 40, 41).

11. The method of claim 10 wherein the route data further comprises the information about which route is assigned to each data portion and when to transmit each of the data portions (42,43,44).

12. The method of any preceding claim wherein the data portion assigned the longest route is transmitted first.

13. The method of any preceding claim wherein the data portion assigned the shortest route is transmitted last.

14. The method according to any preceding claim wherein the data portions are assigned routes in dependence on said order of the data portion in the ordered sequence.

15. The method according to claim 14 wherein a data portion from the

beginning of the ordered sequence is assigned a longer route than a data portion from the end of the ordered sequence.

16. The method according to any preceding claim wherein the data is sent using the IEEE 802.15.4 protocol (16, 17).

17. The method according to any preceding claim wherein the data is sent using the ZigBee standard.

18. A device (1, 10) adapted to be used in a wireless network comprising a plurality of nodes for transmitting a message comprising an ordered sequence of data portions (I-V) through the network to a destination node (d) comprising

transmission means (2, 11) for transmitting each of the data portions (I-V) along a different route (A-E) and at a different time based on said route and order such that the data portions (I-V) are received in the ordered sequence at the destination node (d).

19. The device (1, 10) as in claim 18, further having storage means (6, 14) for storing data about the distance between individual nodes in the network,

calculation means (4, 12) for calculating the time-of-flight along a plurality of routes between a source node and a destination node in the network, and

selecting means (4, 12) for selecting a route for each of said data portions, wherein

the calculation means are further configured to calculate the time of transmission of each data portions such that the portions arrive at the destination node in the ordered sequence.

20. The device (1, 10) according to claim 18 or 19 wherein the device is a ZigBee device or a Bluetooth device.

21. The device (1, 10) according to claim 18 or 19 wherein the device operates according to the IEEE 802.15.4 standard.

22. A network comprising a plurality of nodes as claimed in any one of claims 18 to 22.

23. A network as in claim 22 comprising a mesh network.

24. A network as in claim 22 or 23 wherein the plurality of nodes includes a coordinating node for supplying route information to other nodes when requested.